

SEQUENCE LISTING

<110> Schellenberger, Volker
Liu, Amy D.
Selifonova, Olga V.

<120> Directed Evolution of Microorganisms

<130> GC560-D1

<140> US 10/037,677

<141> 2001-10-23

<150> US 09/314,847

<151> 1999-05-19

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<210> 1

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<212> DNA

<213> Escherichia coli

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gtggatccgg	aagcctttgg	cgtacatggt	attgccgatg	aatttttgct	cgataagccc	240
acgtttgccg	aagtagccga	tgagttcatg	gactatattc	gcggcgcgga	gttggtgac	300
cataacgcag	cgttcgatat	cggctttatg	gactacgagt	tttcggtgct	taagcgcgat	360
attccgaaga	ccaatacttt	ctgtaaggct	accgatagcc	ttgcggtggc	gaggaaaatg	420
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ggtgaagcaa	caattcagcg	cattgtacgt	caggcaagta	agttacgcgt	tgtttttgcg	660
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<211> 246

<212> PRT

<213> Escherichia coli

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Ile	Ile	Glu	Ile	Gly	Ala	Val	Glu	Val	Val	Asn	Arg	Arg	Leu	Thr	Gly
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Asn	Asn	Phe	His	Val	Tyr	Leu	Lys	Pro	Asp	Arg	Leu	Val	Asp	Pro	Glu
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Thr	Phe	Ala	Glu	Val	Ala	Asp	Glu	Phe	Met	Asp	Tyr	Ile	Arg	Gly	Ala
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Glu	Leu	Val	Ile	His	Asn	Ala	Ala	Phe	Asp	Ile	Gly	Phe	Met	Asp	Tyr
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Lys	Arg	Thr	Leu	His	Gly	Ala	Leu	Leu	Asp	Ala	Gln	Ile	Leu	Ala	Glu
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Val	Arg	Gln	Ala	Ser	Lys	Leu	Arg	Val	Val	Phe	Ala	Thr	Asp	Glu	Glu
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<211> 1164

<212> DNA

<213> Escherichia blattae

<400> 3

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ccgcagcacc	tgcgtgaact	gggggtaaaa	gaggccgact	tcccgtacat	ggcagaaatg	1080
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<212> PRT

<213> Escherichia blattae

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Val	Leu	Asp	Gly	Leu	Ala	Met	Phe	Arg	Lys	Glu	Gln	Cys	Asp	Met	Ile
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<212> DNA

<213> Escherichia blattae

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<213> Escherichia blattae

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Gly	Lys	Lys	Ala	Leu	Leu	Val	Thr	Asp	Lys	Gly	Leu	Arg	Ala	Ile	Lys
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Val	Leu	Asp	Gly	Leu	Ala	Met	Phe	Arg	Lys	Glu	Gln	Cys	Asp	Met	Ile
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Ser	Lys	Asp	Ala	Asn	Pro	Val	Thr	Asp	Ala	Ser	Ala	Ile	Gln	Ala	Ile
	210					215					220				
Lys	Leu	Ile	Ala	Thr	Asn	Leu	Arg	Gln	Ala	Val	Ala	Leu	Gly	Thr	Asn
225					230					235					240

Leu Lys Ala Arg Glu Asn Met Ala Cys Ala Ser Leu Leu Ala Gly Met
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 Ala Phe Asn Asn Ala Asn Leu Gly Tyr Val His Ala Met Ala His Gln
 260 265 270
 Leu Gly Gly Leu Tyr Asp Met Ala His Gly Val Ala Asn Ala Val Leu
 275 280 285
 Leu Pro His Val Cys Arg Tyr Asn Leu Ile Ala Asn Pro Glu Lys Phe
 290 295 300
 Ala Asp Ile Ala Thr Phe Met Gly Glu Asn Thr Thr Gly Leu Ser Thr
 305 310 315 320
 Met Asp Ala Ala Glu Leu Ala Ile Ser Ala Ile Ala Arg Leu Ser Lys
 325 330 335
 Asp Val Gly Ile Pro Gln His Leu Arg Glu Leu Gly Val Lys Glu Ala
 340 345 350
 Asp Phe Pro Tyr Met Ala Glu Met Ala Leu Lys Asp Gly Asn Ala Phe
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 Gln Ala Phe
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12

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<223> pOS102 mutD mutated gene

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<223> pOS104 mutD mutated gene

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